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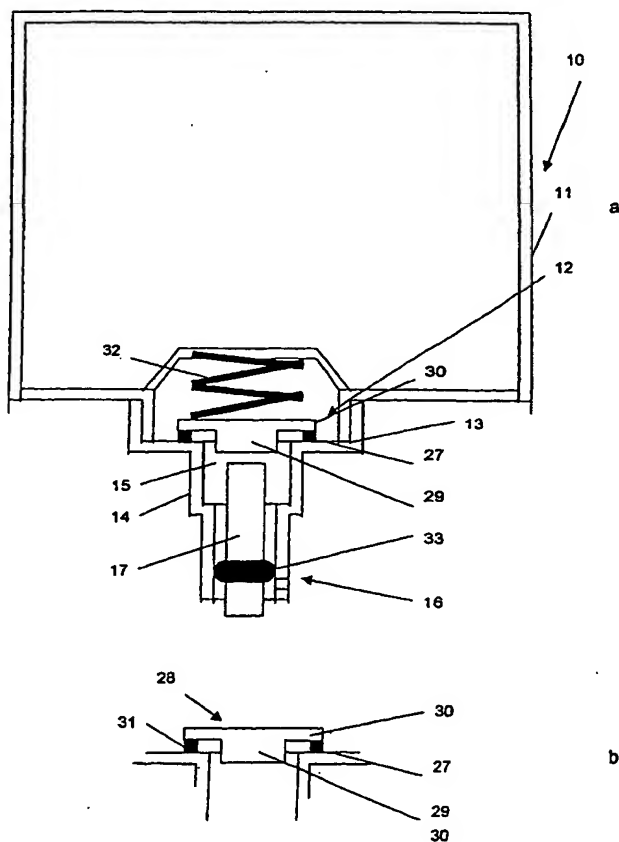
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UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

[Continued on next page]

(54) Title: **INHALER VALVE MECHANISM**



(57) Abstract: A valve mechanism is provided for use in an inhaler comprising a pressurised container (11), and a metering chamber (15), and a valve mechanism wherein the inlet and outlet valves are separate and can be operated independently. The pressure of the fluid in the canister is used to aid the opening of the outer valve so reducing the force to fire a dose. A variant of the valve mechanism allows the user to select from a range of dose volumes by appropriate orientation of the stem.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 03/03139

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B65D83/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B65D G01F A61M B65B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 052 382 A (ALAN GAWTHROP) 4 September 1962 (1962-09-04) cited in the application the whole document	1,8,10, 12
X	EP 0 692 434 A (V A R I S P A) 17 January 1996 (1996-01-17) cited in the application the whole document	1,8,10, 12
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X	CH 395 885 A (AERATOM AG) 15 July 1965 (1965-07-15) the whole document	1
-/-		

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

Int. Application No

PCT/GB 03/03139

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 202 900 B1 (TSUTSUI TATSUO ET AL) 20 March 2001 (2001-03-20) figures	1
X	US 2 974 453 A (PHILIP MESHBERG) 14 March 1961 (1961-03-14) column 2, line 1 - line 27; figures	13
A	US 6 273 304 B1 (HOSHINO KAZUNORI) 14 August 2001 (2001-08-14) the whole document	13, 14
A	FR 2 730 219 A (INNOVATION RECH PLASTIQUE SA) 9 August 1996 (1996-08-09) figures	13
A	US 5 345 980 A (BURT PETER C W ET AL) 13 September 1994 (1994-09-13) claim 1	13
A	GB 2 367 011 A (GLAXO GROUP LTD) 27 March 2002 (2002-03-27) page 15, line 16 - line 24; figures	13

INTERNATIONAL SEARCH REPORT

INTERNATIONAL SEARCH REPORT

International Application No.
PCT/GB 03/03139

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

As a result of the prior review under R. 40.2(e) PCT,
no additional fees are to be refunded.

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☒ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-12

Subject I (claims 1-12) relates to a valve mechanism comprising a first and a second valve mechanism for use in an inhaler comprising a pressurised container and a metering chamber. Claim 12 relates to an inhaler mechanism incorporating a valve mechanism according to any of the claims 1-11, connected to a pressurised container.

2. Claims: 13-14

Subject II (claims 13-14) relates to a method of manufacturing an inhaler according to claim 12.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 03/03139

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